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Wan, Jing

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# Paying the Doughboy: The Effect of Time and Money Mind-sets on Preference for Anthropomorphized Products

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JING WAN

**ABSTRACT** Consumers' motivations (e.g., the need to form social connections) can influence their desire for anthropomorphized products. However, consumers may not always be drawn to anthropomorphized products to fulfill a social need. I propose that the desirability of anthropomorphized products relies on the interaction of consumers' mind-sets and the purpose of consumption. People's sociality and functionality mind-sets can be triggered through reminders of two basic resources—namely, time and money, respectively. Across three studies I demonstrate that matching the purpose of the product (i.e., consumed for functional purposes vs. not) and the mind-set behind the interaction (i.e., functional vs. social) can influence the preference for anthropomorphized products. In particular, anthropomorphized products are more preferred by consumers with a money mind-set (compared with a time mind-set) when the functionality of the products is made salient; this effect is reversed in the absence of a functionality consumption goal.

Anthropomorphism, or giving human characteristics to nonhuman entities, has ancient roots in religion, fables, and even works of art. Anthropomorphism has also been pervasive in marketing, from humans representing brands (e.g., the “I am a Mac” campaign by Apple) to humanlike mascots (e.g., Pillsbury Doughboy) to inanimate products with humanlike physical features (e.g., the curvy body of the Pom bottle). A key underlying assumption is that endowing products and brands with human traits is strategically advantageous: Consumers may be more likely to prefer anthropomorphized products and also more willing to pay higher prices. After all, humans have the fundamental desire to connect with other humans (Baumeister and Leary 1995); thus, it follows that people gravitate toward anthropomorphized products—especially when they want to form social connections (Epley, Waytz, and Cacioppo 2007; Chen, Wan, and Levy 2017; Mourey, Olson, and Yoon 2017).

Over the past decade, researchers have examined how consumers' motivations (e.g., the need to form social connections) can influence their desire for anthropomorphized products. However, extant research on anthropomorphism often overlooks the role of consumption context—that is, what the purpose is of consuming certain products—in re-

lation to consumers' motivations and mind-sets. In human-to-human relationships, how and why people interact with each other depends on relevant and appropriate social norms (Fiske 1992). While people do have the fundamental need to connect with others, not all human-to-human relationships are formed on the basis of building social ties; at times, people seek out others to fulfill more functional needs (e.g., hiring someone to help move furniture). The mind-sets people have about appropriate social norms should also apply in human-to-humanlike-product interactions. Thus, consumers may not always be drawn to anthropomorphized products for the purpose of fulfilling a social need (e.g., Chen, Wan, and Levy 2017), but rather, consumers may desire anthropomorphized products to complete a task for them. I posit that, in order to understand when anthropomorphized products are preferred, we need to recognize the purpose behind the consumption of the product as well as consumers' mind-sets: the effect of anthropomorphism on product preference will depend on the match between the purpose of the product (i.e., consumed for purely functional purposes vs. not) and the purpose of the interaction (i.e., social vs. functional considerations).

People's sociality and functionality considerations can be easily triggered through reminders of two basic and impor-

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Jing Wan (j.wan@rug.nl) is assistant professor of marketing at the Faculty of Economics and Business, University of Groningen, Nettelbosje 2, 9747 AE Groningen, Netherlands. The author thanks Mehrad Moeini-Jazani and other members of the CB research group for their feedback and support. The author is grateful to the editors of this special issue, particularly Ann McGill, and the two reviewers for their valuable comments and suggestions.

tant resources—namely, time and money (e.g., Gino and Mogilner 2013). These two triggers are ubiquitous in the environment, and I make use of them in this research to cue social versus functional relationship considerations in consumers' minds. I examine how aligning the basis for forming a relationship (social vs. functional reasons) with the purpose of consumption can enhance preference for anthropomorphized products. In other words, thinking about time versus thinking about money can have different effects on preference depending on what the humanized product is being used for.

This research contributes to the growing body of anthropomorphism literature in marketing by investigating novel factors that impact the liking of humanized products—the heretofore unexplored influence of consumption context. The need to form social connections indeed increases the tendency to anthropomorphize inanimate objects (Epley et al. 2007; MacInnis and Folkes 2017); however, I find that anthropomorphized products may not always be valued for their social purposes. Additionally, I contribute to the psychology of time and money literature by demonstrating how merely cuing these two constructs can lead consumers to apply different interaction norms in forming product attitudes and making product choices. Finally, from a managerial perspective, I demonstrate that anthropomorphism is not a one-size-fits-all strategy for increasing product preference; consumers' mind-sets and the purpose of the product must also be considered.

## CONCEPTUAL BACKGROUND

### *Anthropomorphizing Products and Brands*

Although researchers have long since understood that consumers readily assign personality traits to brands (Aaker 1997) and form relationships with brands that parallel their relationships with other people in a social context (Fournier 1998), research that explicitly examines consumers' interactions with humanized brands and products has emerged only in the past decade (e.g., Aggarwal and McGill 2007; Brown 2010; Puzakova, Kwak, and Rocereto 2013; Wan and Aggarwal 2015). Some of the research emerging from this body of literature has specifically investigated the circumstances under which anthropomorphic agents are embraced versus rejected. For example, anthropomorphic brands and products may seem more trustworthy because of their inherent "humanness" and ability to express goodwill (Eskine and Locander 2014; Waytz, Heafner, and Epley 2014; Toure-Tillery and McGill 2015). But on the flip side, when something goes wrong and the brand engages in a transgression,

the anthropomorphized brand is evaluated more negatively because consumers attribute malicious intentionality to the brand (Puzakova et al. 2013). In essence, anthropomorphizing or ascribing inanimate objects "with humanlike characteristics, motivations, intentions, or emotions" (Epley et al. 2007) can influence the way consumers perceive and interact with them.

One key driver of anthropomorphic preference emerged from Epley et al.'s (2007) model of motivations to anthropomorphize. They argue that one motivation reason why people anthropomorphize nonhuman entities so readily relates to the basic human need of social connectedness. We are social beings and like to form bonds and relationships with others. When this particular motive is triggered, people seek out others (or, as the case may be, human substitutes) to fulfill this need. Indeed, recent research has found that socially excluded consumers are more likely to choose humanized products over their nonhumanized counterparts (Chen, Wan, and Levy 2017), and that forming relationships with these products can reduce the negative impact of loneliness (Mourey et al. 2017). Through anthropomorphism, consumers are better able to form emotional connections with inanimate products and brands; consequently, consumers like such products and are less willing to part with them (Delbaere, Mcquarrie, and Phillips 2011; Timpano and Shaw 2013). Consistent with this, Chandler and Schwarz (2010) suggest that consumers view their own products through an interpersonal lens when these products are anthropomorphized; as a result, they value their products for the relationship that has been formed between themselves and the humanized product, even when the product is old and declining in performance. Conversely, inanimate products are typically valued for their quality and are more likely to be replaced when performance declines.

In addition to forming social connections, humans also have a strong need to understand and explain the actions of objects in the environment. Ascribing human agency to an object allows for better understanding of why the object "behaves" the way it does (Dawes and Mulford 1996; Epley et al. 2008). An anthropomorphized object is capable of making decisions and engaging in autonomous behaviors, whereas its nonanthropomorphized counterpart is not (Epley and Waytz 2010). As such, a humanized entity can be held responsible for its actions. For example, consumers are more likely to blame their lack of self-control in the face of temptation when the temptation has a face: Hur, Koo, and Hofmann (2015) find that dieters are less likely to experience internal conflict when confronted with a tempting cookie

with a face (the responsibility for consuming the cookie can be attributed to the agentic humanized cookie); however, responsibility cannot be delegated to the nonhuman cookie. Because anthropomorphized entities have agency, consumers feel that they can exert power over or, conversely, be influenced by these entities (e.g., anthropomorphized diseases, slot machines: Kim and McGill 2011; anthropomorphized time: May and Monga 2014). Having power over an entity is specifically relevant in social relations; thus, the aforementioned effect does not occur between consumers and objectified entities (Kim and McGill 2011; May and Monga 2014).

When an inanimate brand or product is anthropomorphized, consumers are more likely to perceive these entities as having motivations and emotions. As a consequence, consumers may believe that the product is capable of completing tasks and engaging in behaviors autonomously; they may also believe that the product is capable of caring and forming attachments. Which of these attributes of the anthropomorphized products consumers attend to and consider when deciding to engage with the product may depend on the consumers' own social motivations.

### *Psychology of Time and Money*

Recent research has shown that manipulating the salience of time versus money can affect people's sociality and functionality considerations; in other words, time and money direct people to think differently about why they would want to engage in social interactions (e.g., Vohs, Mead, and Goode 2006; Mogilner and Aaker 2009). Consumers are frequently thinking about consumption behaviors involving the use of time and/or money (saving and spending) and often encounter these resources in daily life (Gino and Mogilner 2013; Lee et al. 2015). The use and the psychological meaning of these two ubiquitous and important resources lead to different considerations and mind-sets (Vohs et al. 2006; Liu and Aaker 2008; Macdonnell and White 2015), which can carry over into social contexts. More importantly, merely reminding people of time and money can affect the desire for social connection versus the desire for social distance, respectively.

Directing consumers' attention to the concept of time increases their desire to connect with others, and also increases the personal relevance and meaning of their decisions and actions. For example, when the construct of time is activated, individuals desired activities that involved greater social interaction with family and friends rather than being alone and working; these social activities also increased their personal happiness (Mogilner 2010). When deciding to spend time in the company of others, people think about how emo-

tionally meaningful the interaction would be, and they base their decision on the experiential rather than the utilitarian reasons for spending time (Reed, Aquino, and Levy 2007; Liu and Aaker 2008; Lee et al. 2015). In other words, people are thinking about their personal happiness derived from spending time on a particular activity rather than thinking about what purpose it serves or what they can gain from spending time.

Thinking about money, in contrast, leads to a tendency toward social distance when it comes to engaging with others. Rather than forming social bonds, individuals who are primed to think about money feel self-sufficient and independent (Vohs et al. 2006, 2008). Even being merely reminded of the concept of money makes people become more goal-directed, more productive, and less willing to engage with others (Vohs et al. 2006). In other words, these people are less likely to want to form social bonds with others; instead, they are more focused on their own goals and they believe that they can achieve their goals by exchanging money for necessary services (Vohs and Baumeister 2011).

Introducing money into a social interaction makes the entire interaction feel more transactional. For example, Gneezy and Rustichini (2000) found that after a preschool instituted a monetary fine for parents who were late in picking up their children, the undesirable late pickups persisted because the parents viewed the fine as simply a payment for a service rendered. Rather than deterring unwanted behavior, introducing money in this context highlighted the functionality of other people (i.e., the preschool workers) and the fact that money could be exchanged for a necessary service. According to Fiske (1992), relationships that are formed on the basis of money (i.e., market-pricing relationships) are indeed more functional in nature and are meant to serve specific purposes. In such relationships, people are more attracted to others who are able to provide benefits and reciprocate any benefits granted to them (Fiske 1992; Clark and Mills 1993). In other words, money-minded people prefer not to be social for the sake of forming social bonds, but they may be willing to reach out to others who can be instrumental in fulfilling a goal. Indeed, people primed with money become more willing to socialize with others when they are reminded that socializing has functional benefits. Teng and colleagues (2016) find that merely thinking about money led participants to focus on the instrumentality of other people. When given a choice, money-primed participants approached others who were perceived to be useful in attaining personal goals but avoided others who were not perceived to be useful.

In sum, thinking about time and money lead to different mind-sets on the purpose for engaging in social interactions. These mind-sets can predict when and why people would want to engage with others. Time leads individuals to consider the positive feelings and experiences arising from connecting with other people and not about what functional “use” one can derive from others. On the other hand, money leads individuals to reject social interactions and focus more on the self as an independent unit, unless one can make use of the abilities and services of others.

### CURRENT RESEARCH

In the present research, I use time and money to cue consumers’ mind-sets about the purpose for engaging in social interactions, and I investigate how these consumers then evaluate humanized products. The mind-sets that time and money activate can influence the way that people interact with other humans: for time-minded people, social relationships are beneficial for forming emotional connections; for money-minded people, social relationships are beneficial for making use of the relevant skills that others have. As past research on anthropomorphism has shown, people evaluate and interact humanized products similar to the way they evaluate actual humans (e.g., Aggarwal and McGill 2007; Epley et al. 2007). Thus, these time and money mind-sets should also be relevant when consumers are confronted with anthropomorphized products. Conversely, these social interaction mind-sets would be meaningless in the context of evaluating objectified products as they do not have emotions or agency.

I posit that anthropomorphized products would be more appealing to time-minded consumers compared with money-minded consumers, as consistent with prior work on time, money, and desire for social connection with other people. This should especially be the case when there are no salient consumption goals or functions that need to be fulfilled. After all, thinking about time intensifies the motivation to form social connections, whereas thinking about money primes people to value their independence and create social distance when there is no functional use for the other person. Past research has shown that priming consumers with the concept of time (vs. money) increases satisfaction toward products that these consumers already possess because they are reminded of the personal connection they have formed with the product, rather than the utility of the product (Mogilner and Aaker 2009; Lehmann and Reimann 2012). For objectified products that consumers do not already own, priming time cannot elicit any preexisting feelings of personal con-

nection with the product; however, for humanized products, consumers reminded of sociality (through time priming) would be more likely to approach the product for the purpose of forming a social connection compared with consumers reminded of instrumentality (through money priming).

More importantly, I posit that the effect of time versus money on preference for anthropomorphized products does not hold under all circumstances—in particular, the effect will reverse when the anthropomorphized product is consumed not for its own sake but to serve a particular purpose on behalf of the consumer. Again, drawing upon the way that people engage in human-to-human interactions, I argue that the mind-set behind these interactions will translate to human-to-humanlike-product interactions but will not be relevant for human-to-objectified-product interactions. In the present context, if the humanized product has a clear functional purpose and is meant to be consumed for the services it renders, then people under the money mind-set would be inclined to engage with such humanlike products. In the absence of functionality cues, people do not by default perceive other people in an instrumental manner; indeed, Teng et al. (2016) found that neutral-primed (vs. money-primed) participants did not show a preference for the “more useful” target other, who possessed skills that could help with a subsequent group task, over the “less useful” target other. Money reminds people the importance of their personal goals (e.g., Vohs et al. 2006; Mogilner 2010) and that the skills and services of others can be used to achieve their own goals (Vohs and Baumeister 2011).

Introducing functionality and transactional considerations to a social relationship can change the way people interact with each other, and people are less likely to desire emotional connections with others who are valued primarily for their functional service (Fiske 1992; Heyman and Ariely 2004); in contrast, when functionality considerations are valued (i.e., under a money prime), people prefer others who can “get the job done” (Teng et al. 2016). Hence, I predict that money-minded consumers (vs. time-minded) would be more likely to value an anthropomorphized product that helps them achieve a particular goal. As mentioned before, the social motivation to form emotional connections (or avoiding such emotional connections) versus making use of someone who can help with achieving a goal is not relevant when evaluating nonhumanized entities that lack agency. Humanized entities are perceived to be more intelligent and capable than their objectified counterparts (Nass, Isbister, and Lee 2000); thus, a necessary task can be outsourced to a human with relevant skills who can function autonomously,



but the same task cannot be fully outsourced to an objectified entity.

People may be naturally inclined to form social connections with humanlike objects, especially when the need to be social is salient (e.g., Chen, Wan, and Levy 2017), but when the object is meant to fulfill an instrumental goal, forming a social connection will no longer be the default response. People are more likely to value the functionality of others when in a money versus neutral mind-set (Teng et al. 2016). To verify that this is indeed the case when comparing money-minded people to time-minded people, I conducted a pretest to demonstrate that activating the concept of money rather than time cues considerations more in line with exchange-oriented relationships. Within exchange-oriented relationships, interaction partners prioritize on the benefits that they can receive from the other person (Clark and Mills 1993). Rather than forming a connection based on liking and caring for the other person, an exchange orientation leads people to form relationships based on quid pro quo concerns. In this pretest, I investigated if people valued functional and exchange-oriented relationships more when they are cued with money rather than time. I randomly assigned 76 participants from the online panel Amazon Mechanical Turk (MTurk) to either the time or money condition. The two concepts were primed through a word association task whereby participants listed 10 words they associate with the concept of “time” or “money.” Participants were then asked to what extent they endorsed exchange-oriented value (e.g., doing things for others in hopes of getting something in return, evaluating others based on the benefits they provide; measures adapted from Aggarwal and Zhang [2006]). Money-primed participants expressed higher levels of exchange orientation ( $M_{\text{time}} = 2.88$ ,  $M_{\text{money}} = 3.52$ ,  $F(1, 74) = 4.58$ ,  $p = .04$ ), suggesting that cuing the concept of money encourages people to evaluate others based on their functional value. Thus, I suggest that an anthropomorphized product that can help fulfill a specific function will be valued more by money-primed consumers. However, because this value of functional purpose is not present among time-primed consumers, they will not value a function-oriented anthropomorphized product more positively.

Across three studies, I demonstrate that the desirability of anthropomorphized products can increase or decrease based on whether the consumers’ goal is consistent with or contradictory to the mind-sets associated with time versus money. I first demonstrate that consumers prefer a humanized product when cued with time rather than money, in the absence of any functionality cues. Next, I reverse this effect by pre-

senting consumers with a product that is associated strongly with a functional purpose, and I demonstrate that those who are primed with money prefer the anthropomorphized product compared with those primed with time—in particular, this effect is driven by the money-minded consumers. Finally, I show that positioning the same anthropomorphized product as either functional or experiential can influence consumers’ preferences, such that only when the humanized product is clearly functional do money-minded consumers prefer the product more than time-minded consumers.

## STUDY 1: CONSUMING WITHOUT A FUNCTIONAL PURPOSE

In study 1, I examined whether being primed with time (vs. money) increases people’s preference for anthropomorphized products, in the absence of an overt functionality goal. Products like clothing and accessories (e.g., shoes, bags) can often be evaluated based on both functional features (e.g., durability) and nonfunctional/experiential features (e.g., design and style; Khan, Dhar, and Wertenbroch 2005); in other words, these products are neither inherently functional nor experiential. The present study used a backpack as the target product, and no specific functional purpose for using the backpack was provided.

### Method and Procedure

Study 1 used a 2 (mind-set prime: time vs. money)  $\times$  2 (product presentation: anthropomorphized vs. objectified) between-subjects design. Participants from MTurk ( $N = 199$ ,  $M_{\text{age}} = 38.72$ , 48% female), were randomly assigned to one of the four conditions.

For this study, I manipulated the salience of time versus money by displaying images of calendar months or dollar bills (manipulation adapted from Mogilner and Aaker 2009). Participants in the time condition saw a series of calendar months, and they were asked to identify the date that was circled on each calendar page. In the money condition, participants saw a series of American dollar bills, ranging from \$1 to \$50 and were asked to identify the denomination of each bill.

Subsequently, in an ostensibly unrelated study, participants saw an ad for a casual, stylish backpack. In the anthropomorphism condition, the backpack was described using first-person language (manipulation adapted from Aggarwal and McGill [2007]) and included a smiley face in the logo. In the objectified condition, the backpack was described using third-person language and lacked the smiley face in the logo. Furthermore, participants were asked to come up with three

personality traits (anthropomorphism condition) that the backpack might have, or three adjectives that describe the backpack (objectified condition; manipulation adapted from Chandler and Schwarz [2010]).

After seeing the ad, participants rated the extent to which they liked the product, were interested in the product, wanted the product and were likely to buy the product (1 = not at all, 7 = very much). These questions were averaged to form a single score of product preference (Cronbach's  $\alpha = .95$ ). As a manipulation check for product anthropomorphism, participants were also asked to what extent the backpack has feelings, free will, personality, and intentions (1 = strongly disagree, 7 = strongly agree).

### Results and Discussion

The anthropomorphism manipulation check indicated that the backpack that described itself in first-person language was indeed perceived to be more likely to have feelings and thoughts than the backpack that was described in third-person language ( $M_{\text{anthro}} = 2.35$ ,  $SD = 1.37$ ;  $M_{\text{object}} = 1.73$ ,  $SD = 1.13$ ;  $F(1, 197) = 12.03$ ,  $p = .001$ ).

A two-way ANOVA revealed a significant interaction between the mind-set prime and product anthropomorphism on preference for the backpack ( $F(1, 195) = 3.82$ ,  $p = .05$ ). Planned contrasts showed that time-primed participants rated the anthropomorphized backpack more highly than the money-primed participants for the same backpack ( $M_{\text{time}} = 5.04$ ,  $SD = 1.37$ ;  $M_{\text{money}} = 4.38$ ,  $SD = 1.78$ ;  $F(1, 195) = 4.51$ ,  $p = .04$ ). When the backpack was not anthropomorphized, the type of mind-set did not have an effect on the desirability of the backpack ( $M_{\text{time}} = 4.65$ ,  $SD = 1.64$ ;  $M_{\text{money}} = 4.85$ ,  $SD = 1.42$ ;  $F(1, 195) = .41$ ,  $p = .52$ ).

When the backpack was anthropomorphized, the mind-set consumers were in predicted how much they liked the product. The humanized backpack may seem more like a desirable interaction partner to those who seek social connectedness (time-minded people) compared with those who prefer to avoid social others (money-minded people). However, when the product was not anthropomorphized, the motivation to seek out others or avoid others was not relevant because the target of judgment is not human; and indeed, the time versus money prime did not influence liking of the objectified backpack.

As noted previously, I expect this effect of time- versus money-mind-set on anthropomorphism to reverse when the value of the humanlike product is purely functional. The functional attribute of such a humanized product would be salient and valued for money-minded consumers because

these consumers evaluate others based on how useful they are (Clark and Mills 1993; Teng et al. 2016) and the humanized product would be able to "get the job done." Conversely, time-minded consumers would not consider or value this attribute when evaluating the humanized product. These predictions are tested in study 2.

### STUDY 2: CONSUMING A FUNCTIONAL PRODUCT

The goal of this study was to examine if the effects of time versus money on preference for anthropomorphized products will reverse for a product that is typically consumed for functional purposes. Unlike the backpack from the previous study, some goods are clearly more utilitarian—such as detergent, vacuum cleaners, and screwdrivers (Khan et al. 2005; Chen, Lee, and Yap 2017). These products tend to be used for achieving objective goals rather than consumed for pleasure and enjoyment. In this study, a garbage can was used for its purely functional value. A garbage can has very little purpose other than containing trash and trapping odors.

#### Method and Procedure

Study 2 used a 2 (mind-set prime: time vs. money)  $\times$  2 (product presentation: anthropomorphized vs. objectified) between-subjects design. Participants from an online panel, MTurk ( $N = 211$ ,  $M_{\text{age}} = 37.98$ , 53% female), were randomly assigned to one of the four conditions.

All participants were presented with an ad for a foot pedal garbage bin called "Bino Pedal." The garbage bin was anthropomorphized by using a speech bubble with first-person language; to strengthen the anthropomorphism manipulation, the bin had "eyes" as well as a small hanging dustpan on the side, which hinted at an "arm." In the objectified version, the garbage bin was described in third-person language, with no "eyes" or additional appendages (the dustpan was propped beside the garbage can). After seeing the ad, participants were asked to write down the first personality trait (anthropomorphism condition) or adjective (object condition) that came to mind. In this study, a different manipulation was used to elicit thoughts of time and money. The time and money manipulation was built into the product ad itself (adapted from Mogilner and Aaker 2009). The ads contained a header: "Spend some time on Bino Pedal" (time condition) or "Spend some money on Bino Pedal" (money condition).

After seeing the ad, participants rated the extent to which they liked the product, were interested in the product, wanted to use the product, and were likely to buy the

product (1 = not at all, 7 = very much). These questions were averaged to form a single score of product preference (Cronbach's  $\alpha = .94$ ).

### Results and Discussion

A two-way ANOVA revealed an interaction between the mind-set prime and the product presentation ( $F(1, 207) = 4.16$ ,  $p = .04$ ). When the garbage bin was anthropomorphized, those who thought about money preferred the product more than those who thought about time ( $M_{\text{anthro-money}} = 5.87$ ,  $SD = .94$  vs.  $M_{\text{anthro-time}} = 5.28$ ,  $SD = 1.45$ ;  $F(1, 207) = 4.30$ ,  $p = .04$ ). In addition, the money-primed participants preferred the anthropomorphized garbage bin over the objectified version of the same product ( $M_{\text{anthro-money}} = 5.87$ ,  $SD = .94$  vs.  $M_{\text{object-money}} = 5.22$ ,  $SD = 1.38$ ;  $F(1, 207) = 5.34$ ,  $p = .02$ ). Money- versus time-mind-sets did not have any influence on liking of the objectified garbage can ( $M_{\text{object-time}} = 5.42$ ,  $SD = 1.51$ ), and people with a time-mind-set did not differentiate between the anthropomorphized versus objectified product (all  $F < 1$ ,  $p > .10$ ).

These findings provide support for the prediction that when a product is clearly functional, the mind-set of consumers can influence whether or not they like the anthropomorphized product—and furthermore, this effect is driven by the mind-set that money cues. The product becomes particularly useful to the money-minded consumer when it is agentic and can help the consumer achieve his/her goals; however, the ability to achieve goals is less valuable to time-minded consumers. As such, the money- versus time-mind-set is only relevant when consumers evaluate humanized products, but not objectified products.

Due to the association with garbage, it is possible that the bin was perceived more negatively than the backpack in study 1, which in turn may have influenced the results of this study. To ensure that the valence of the products cannot explain the time versus money reversal between studies 1 and 2, I conducted a post-test. Seventy-four participants ( $M_{\text{age}} = 34.00$ , 43% female) from MTurk saw either a picture of the backpack used in study 1 or a picture of the garbage bin used in study 2 (without any humanizing cues). They then rated the garbage bin or the backpack on four 7-point bipolar scales (1 = bad, dislike, negative, unpleasant; 7 = good, like, positive, pleasant), which were averaged to form a single score of positive product perception (Cronbach's  $\alpha = .92$ ). A one-way ANOVA revealed that participants rated the garbage bin as equally positive as the backpack ( $M_{\text{garb_bin}} = 5.41$ ,  $SD = .98$  vs.  $M_{\text{backpack}} = 5.37$ ,  $SD = 1.36$ ;  $F(1, 72) = .02$ ,  $p = .88$ ).

Although the garbage bin was not regarded more negatively than the backpack, there are still many differences between the two products, aside from the salient functional use of the product. Study 3 addresses this concern by keeping the product constant. While the garbage bin was clearly functional, other products can be framed as more or less able to fulfill a functional purpose. If consumers have a functional consumption goal, then humanized products will be valued for their ability to “get the job done” by money-minded consumers. Conversely, if the reason for consuming was less purpose-driven and more pleasurable or experiential, the aforementioned effect should be attenuated because there would no longer be an objective goal to be accomplished. This prediction is tested in the next study.

### STUDY 3: EXPERIENTIAL VERSUS FUNCTIONAL CONSUMPTION

The same product can be framed as relatively more functional or more experiential. A hedonic or experiential product/goal to consume focuses on the enjoyable and pleasurable aspects of consumption, whereas a utilitarian product or utilitarian consumption goal focuses on the instrumental and functional aspects of consumption (Khan et al. 2005). In this study, I examine whether highlighting different goals to consume (for a purpose or for the experience) and framing a product according (highlighting functional aspects or experiential aspects of the product) can influence the preference for an anthropomorphized product among money- versus time-minded consumers.

#### Method and Procedure

Study 3 used a 2 (prime: time vs. money)  $\times$  2 (product framing: utilitarian vs. hedonic) between-subjects design. Participants from MTurk ( $N = 220$ ,  $M_{\text{age}} = 38.77$ , 51% female) were randomly assigned to one of the four conditions.

All participants were presented with an ad for an anthropomorphized humidifier named “Mist Zephyr.” The humidifier was anthropomorphized by using first-person language, and a small, unobtrusive “face” was implied by the knobs on the front of the humidifier. To further encourage participants to think of the humidifier as human, they were asked to come up with three personality traits that they think “Mist Zephyr” would have. In the utilitarian condition, the functional uses of the humidifier were emphasized (product framing adapted from Klein and Melnyk [2014]). Participants were told to imagine that they were in search of a humidifier that helps with reducing congestion and coughing. The utilitarian humidifier was marketed to relieve



cold and sinus symptoms and remove musty air. In the hedonic condition, the pleasurable and experiential aspects were highlighted. Participants were told to imagine that they were in search of a humidifier that can diffuse refreshing aromas throughout the home. The hedonic humidifier was marketed as having a stylish design and being able to create a soothing and calming atmosphere. Similar to the previous study, the time and money manipulation was built into the product ad itself. The ads contained a tagline: “Spend some time with Mist Zephyr” (time condition) or “Spend some money on Mist Zephyr” (money condition).

After seeing the ad, participants rated the extent to which they liked the product, interested in the product, wanted the product, and were likely to buy the product (1 = not at all, 7 = very much). These questions were averaged to form a single score of product preference (Cronbach’s  $\alpha = .92$ ). In addition, as a manipulation check of the product framing, participants were also asked to rate the extent to which they perceived the product to be utilitarian, hedonic (these two terms were defined for participants), functional, and enjoyable (1 = not at all, 7 = very much).

### Results and Discussion

The manipulation check of hedonic versus utilitarian showed that the “cold and sinus symptoms reducing” humidifier was indeed significantly more utilitarian and less hedonic compared with the “soothing and calming” humidifier on all measures (all  $F > 1$ , all  $p < .01$ ).

A two-way ANOVA revealed a significant interaction between time versus money mind-set and product type on liking of the anthropomorphized humidifier ( $F(1, 216) = 5.16$ ,  $p = .02$ ). Consistent with my previous findings, a planned contrast revealed that money-primed participants liked the humidifier more when it was designed to fulfill a functional purpose compared with the time-primed participants ( $M_{\text{util-money}} = 5.51$ ,  $SD = 1.18$  vs.  $M_{\text{util-time}} = 5.00$ ,  $SD = 1.48$ ;  $F(1, 216) = 4.30$ ,  $p = .04$ ). This effect was attenuated when the humidifier was meant to be consumed for experiential purposes ( $M_{\text{hedon-money}} = 4.94$ ,  $SD = 1.40$  vs.  $M_{\text{hedon-time}} = 5.25$ ,  $SD = 1.21$ ;  $F(1, 216) = 1.37$ ,  $p = .24$ ). For the money-minded participants, the humanized humidifier was more appealing when it could fulfill a functional purpose than when it was more experiential ( $F(1, 216) = 5.28$ ,  $p = .02$ ).

Again, I found support for the prediction that highlighting how a humanized product can serve a functional goal is more appealing to money-minded participants compared with time-minded participants. The effect is attenuated

when the goal to consume is more experiential in nature; indeed, money-minded consumers liked the humanized product less when it did not serve any instrumental purposes. This is consistent with past findings that money salience makes people avoid others, unless they are useful for helping achieve a particular function (e.g., Mogilner 2010; Teng et al. 2016).

There is a possibility that the effect might reverse for a product designed to fulfill a more experiential purpose, such that time-minded participants would show a stronger preference to engage socially with such a humanized product, whereas money-minded participants would seek social distance. While the trend hints at such an effect, there was no statistical difference between the time- versus money-minded participants on their preference for the hedonic humidifier. This may be due to the fact that an explicit consumption goal was still provided, even in the hedonic condition (i.e., consuming a product that makes the house smell nice). While the utilitarian product did not seem hedonic, the hedonic product still retained some functional purposes. This assumption is partially reflected in the product framing manipulation check: in the hedonic condition, a paired sample  $t$ -test revealed that participants found the humidifier to have both hedonic as well as utilitarian attributes ( $M_{\text{hedon}} = 4.83$  vs.  $M_{\text{util}} = 4.71$ ;  $t(101) = .57$ ,  $p = .57$ ). In this case, some time-minded participants may have felt that the humidifier was designed to fulfill a functional purpose, despite it being also enjoyable to use. Unlike in study 1, the presence of the consumption goal and the emphasis on how the product fulfills the goal in study 3 may have presented the product as somewhat “functional,” even in the hedonic condition.

### GENERAL DISCUSSION

Across three studies, I demonstrate that time and money can affect the desirability of anthropomorphized products, depending on the purpose for which the product is intended. I found in the first study that time-minded consumers prefer an anthropomorphized backpack more than money-minded consumers. Presumably, in the absence of a functional goal or purpose, those primed with time perceived the anthropomorphized backpack as a desirable interaction partner, while those primed with money preferred to distance themselves from other humans and humanlike objects. However, this effect was reversed in the second study, where the target product was something that was clearly functional (i.e., a garbage can). When a product is meant to help achieve a particular functional goal, money-minded consumers exhib-

ited a higher preference for the humanized garbage can. Money-minded consumers valued the functional ability of the product, whereas time-minded consumers did not. This effect was replicated in the third study, with a humanized humidifier that was neither inherently functional nor experiential. When the functionality of the product was highlighted, money-minded participants preferred it; however, the effect was attenuated when the product's experiential features were emphasized.

I find that preference for anthropomorphized products depends on consumers' social motives and the product's purpose. Money-minded consumers are particularly drawn to anthropomorphized products when they serve a specific function. However, it is worth noting that, although I find the predicted differences between money- versus time-minded consumers across studies, I do not observe that time-minded consumers significantly prefer an anthropomorphized product over its nonanthropomorphized counterpart in the absence of a functional goal. It may be possible that the desire to form emotional connections is more strongly directed toward close others (e.g., Mogilner 2010) and that forming a connection with the target should have some personal relevance for the consumer (e.g., Reed et al. 2007). As such, a "stranger" (i.e., a new anthropomorphized product) may not elicit as strong of a desire to form an emotional connection. Perhaps highlighting the potential to collaborate and cocreate with a social partner may increase the desirability of an anthropomorphized (vs. objectified) product among time-minded consumers, to make the humanized product seem more relevant to the self. Brands and products can be positioned as partners that coproduce benefits with the consumer versus servants that are the providers of benefits (Aggarwal and McGill 2012; Kim and Kramer 2015). Emphasizing the brand or product role (partner vs. servant) could potentially amplify the difference in preference for anthropomorphized products among time- versus money-minded consumers. While beyond the scope of the present article, this could be an interesting avenue for further exploration in future research.

I contribute to the growing body of literature on anthropomorphism by introducing a novel perspective on how consumer mind-sets can interact with consumption purpose to influence attitudes on anthropomorphized products. When framing an anthropomorphized product, it is important to consider how the consumer will be engaging with the product, whether they are considering it from a functional use angle versus or if they are more in the mind-set of forming social relationships. Although eliciting the motive for form-

ing social connections may seem beneficial to increase the likelihood that consumers will be drawn to connect with an anthropomorphized product, the results reveal that this is not always an effective approach. For products that are designed to complete functional tasks (particularly tasks that are not experiential or enjoyable), it may be worthwhile use anthropomorphism as a strategy to highlight how well the product can achieve the consumers' goals, particularly when consumers are already thinking about the cost of the product.

Given that preference for anthropomorphism depends on consumers' mind-sets (e.g., desire for social connection, desire to understand and control our environment; Epley et al. 2007), I identify a simple way to elicit mind-sets through time and money priming. Even the mere reminder of these two resources can change people's motivations to engage in social interactions. As such, these results also contribute to the time and money literature. The findings in this area of research point to money-minded people being more disconnected from the products they own (Mogilner and Aaker 2009; Lehmann and Reimann 2012) and more distant from social others (e.g., Vohs et al. 2006; Mogilner 2010). Building upon this body of work and extending the work of Teng et al. (2016), I find that money-minded people prefer engaging with humanlike products more than time-minded people when the products clearly serve a functional purpose. In fact, a product is perceived as more desirable when it appears to have the agency and ability to help with achieving a goal (i.e., when the product is humanlike) than when the product is not perceived to be agentic and autonomous.

Overall, I find that preference for anthropomorphized products depends on the consistency between the consumption goal and consumers' motivations for engaging in social interactions. This research contributes to furthering our understanding of anthropomorphism and shows how the properties of objects and the goals and mind-sets of individuals interplay to jointly influence people's preferences.

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